

---

**From:** Kissinger, Lon  
**Sent:** Wednesday, May 04, 2016 4:41 PM  
**To:** Tabor, Brock N (DEC)  
**Cc:** Sonafrank, Nancy B (DEC); Szilag, Matthew  
**Subject:** RE: BAF/BCF approach in Idaho  
**Attachments:** BAF-BCF Comparison 3-22.xlsx

Hi Brock,

I did some work looking at the impact of using BCFs vs. BAFs and TL4 BAFs vs. ingestion weighted BAFs in relation to Washington's AWQC. Generally, use of BCFs can lead to much less stringent criteria. Using ingestion weighted BAFs based on national trophic level (TL) specific consumption patterns vs. TL4 BAFs doesn't have as much of an impact. TL4 BAFs are generally one to two fold higher than ingestion weighted BAFs. The impact of ingestion weighting of BAFs using trophic level specific consumption rates and the need to consider this issue might be focused further by looking at the major chemicals of interest for AWQC. Of course, we do need to consider consumption of marine mammals.

Regards,

Lon Kissinger  
Risk Assessor  
Office of Environmental Assessment, Risk Evaluation Unit  
U.S. EPA - Region 10, Suite 900  
Mail Stop: OEA-095  
1200 6th Ave.  
Seattle, WA 98101

kissinger.lon@epa.gov

206-553-2115 voice  
206-553-1645 FAX

Fold lower	0.000284863	0.002527273
Fold higher	215	215
	BCF/BAF_wtd	BCF/BAF_TL4
BCF 10+ times higher than BAF	7	7
BCF 5 to up to 10 times higher than BAF	2	0
BCF 2 to up to 5 times higher than BAF	7	7
BCF 1 to up to 2 times higher than BAF	15	8
BCF equals BAF	0	1
BCF 1 to up to 2 times lower than BAF	21	24
BCF 2 to up to 5 times lower than BAF	6	12
BCF 5 to up to 10 times lower than BAF	4	1
BCF more than 10 times lower than BAF	12	14

Fold lower	0.112715417
Fold higher	3.047858942

	BAF_TL4/BAF_wtd
BAF_TL4 10+ times higher than BAF_wtd	0
BAF_TL4 5 to up to 10 times higher than BAF_wtd	0
BAF_TL4 2 to up to 5 times higher than BAF_wtd	6
BAF_TL4 1 to up to 2 times higher than BAF_wtd	60
BAF_TL4 equals BAF_wtd	3
BAF_TL4 1 to up to 2 times lower than BAF_wtd	2
BAF_TL4 2 to up to 5 times lower than BAF_wtd	1
BAF_TL4 5 to up to 10 times lower than BAF_wtd	2
BAF_TL4 more than 10 times lower than BAF_wtd	0
	74

---

**From:** Tabor, Brock N (DEC) [mailto:brock.tabor@alaska.gov]  
**Sent:** Tuesday, April 05, 2016 10:21 AM  
**To:** Kissinger, Lon  
**Cc:** Tabor, Brock N (DEC) ; Sonafrank, Nancy B (DEC) ; Szelag, Matthew  
**Subject:** BAF/BCF approach in Idaho

Lon,

Thanks for following up with Dr. Gobas regarding Alaska's trophic level questions and marine mammals. I am keen to see this conversation continue so let me know when a good time would be to set up a meeting with him. I know you're pretty busy with Washington and Idaho so there's no pressure on my part. That said, we do want to keep this process moving forward and field season is approaching. Maybe a good approach would be for you, Matt, Nancy, and I to get together with him to help frame the issue and a series of questions that we need to address? Nancy and I could always take a first crack at it if that's easier for you.

I am currently looking though Idaho's final rule and their approach to addressing BAF/BCF. Curious if you have any thoughts about it- I realize that this isn't necessarily your area of expertise. I am of the mind that Alaska could use a similar approach for addressing FCR and marine mammal consumption by working with the trophic level ratio on a regional basis. The ADFG data has a fair amount of info on protein sources and we might be able to adjust the TL values-

$$EPA\ 2015\ National\ BAF = \frac{(TL2 \times 0.001)}{1}$$

It's a pretty broad approach but does allow more regional variation when appropriate.

The more I think about this, the more it makes sense to adopt a statewide set of HHC formula baseline values but complement it with a rule that allows for making regional/SSC changes via administrative actions- essentially a performance-based approach. That concept still needs some work but... its an idea.

Thanks,

Brock Tabor

[brock.tabor@alaska.gov](mailto:brock.tabor@alaska.gov)

Alaska Dept. of Environmental Conservation

Division of Water: Water Quality Standards, Assessment & Restoration

(907) 465-5185

<http://www.dec.alaska.gov/water/wqsar/index.htm>

